

Application No.: 10/643,944

REMARKS

Independent claims 1 and 5 stand rejected under 35 U.S.C. § 102 as being anticipated by Kozaki et al. '191 ("Kozaki"). This rejection is respectfully traversed for the following reasons.

Each of claims 1 and 5 embody a configuration in which no p-type semiconductor layer is present between the active layer and the intermediate layer. In direct contrast, a p-type semiconductor layer 10 *is* present between the alleged active layer 9 and alleged intermediate layer 12 (see col. 24, lines 9-15). Indeed, one of the features of the present invention is directed to exclusively Applicants' finding that Mg dopants in the active layer comprising an InGaN well layer reduces luminous efficiency of the active layer. Only Applicants have recognized and considered this drawback of the conventional system, and conceived of the means by which to obviate said drawback. In the claimed configuration, only Applicants conceived of a means by which p-type impurity of the p-type semiconductor layer does not diffuse into the active layer. The cited prior art appears to be completely silent as to such drawbacks with p-type diffusion in the manner referenced, let alone suggest a suitable means to obviate said drawback. Indeed, the cited prior art provides no disclosed need or desire to provide a configuration in which no p-type semiconductor layer is present between the active layer and the intermediate layer, let alone suggest doing so.

As anticipation under 35 U.S.C. § 102 requires that each and every element of the claim be disclosed, either expressly or inherently (noting that "inherency may not be established by probabilities or possibilities", *Scaltech Inc. v. Retec/Tetra*, 178 F.3d 1378 (Fed. Cir. 1999)), in a single prior art reference, *Akzo N.V. v. U.S. Int'l Trade Commission*, 808 F.2d 1471 (Fed. Cir. 1986), based on the forgoing, it is submitted that the cited prior art does not anticipate claims 1 and 5, nor any claim dependent thereon.

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Independent claims 6 and 13 stand rejected under 35 U.S.C. § 102 as being anticipated by JP '214. As a preliminary matter, Applicants note that the Examiner alleges that claim 13 is being characterized as a product-by-process claim in which the process limitations are not being given patentable weight. It is respectfully submitted that this allegation is in clear error, as claim 13 is in fact a "method of manufacturing" claim whereby all process limitations MUST be given patentable weight. A product-by-process claim would typically be in the following format: An apparatus, comprising: A, B, C, wherein A is made by the process D. In the instant case, claim 13 recites "A process for manufacturing a semiconductor laser, comprising the steps of:" and is therefore in proper "method" format, so that all process limitations must be given full patentable weight.

Nonetheless, solely in order to expedite prosecution, claims 6 and 13 have been amended, without prejudice/disclaimer to the subject matter embodied thereby, to incorporate the feature of claim 8. Claim 8 stands rejected under 35 U.S.C. § 103 as being unpatentable over JP '214 in view of Yoshie et al.. This rejection is respectfully traversed for the following reasons.

The Examiner admits that JP '214 does not disclose the claimed concentration, and therefore relies on Yoshie et al. as suggestive of said concentration and thereby modifies JP '214 in an attempt to reach the claimed combination. However, it is respectfully submitted that the alleged current blocking layer of Yoshie et al. is functionally a conventional blocking layer for reducing drive current and threshold current, and appears to be completely unrelated to a diffusion blocking layer for blocking p-type impurity diffusion from the p-type semiconductor as can be realized by the claimed *combination*. Indeed, it does not appear that the construction of JP '214 has a disclosed need or desire for the asserted modification in view of the very particular structural arrangement of Yoshie (opening in blocking layer 19 of Yoshie, and arranged next to

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cladding versus guide layer 109 of JP '214, etc.) described when providing the disclosed concentration. Only Applicants have conceived of the effects provided by the specifically claimed *combination* and the resulting effects thereof, whereas the purported benefits described by Yoshie for the disclosed concentration are not necessarily attributable to the device of JP '214. Based on the foregoing, it is respectfully submitted that claims 6 and 13 are patentable over the proposed combination as setting forth a novel and non-obvious *combination of features which provide new and unexpected results.*

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as the independent claims are patentable for the reasons set forth above, it is respectfully submitted that all claims dependent thereon are also patentable. In addition, it is respectfully submitted that the dependent claims are patentable based on their own merits by adding novel and non-obvious features to the combination.

Based on the foregoing, it is respectfully submitted that all pending claims are patentable over the cited prior art. Accordingly, it is respectfully requested that the rejections under 35 U.S.C. § 102/103 be withdrawn.

CONCLUSION

Having fully responded to all matters raised in the Office Action, Applicants submit that all claims are in condition for allowance, an indication for which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's

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amendment, the Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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